Then, the 1C and 0.2C capacity retentions were measured for the batteries G1 - G4 in the same manner as in the above Experiment 1. The results are shown in Figure 7. In this Figure 7, the data obtained for the battery D of the present invention constructed in the preceding Experiment 4 are also shown.

As can be seen from the results shown in Figure 7, when the third oxide, in the form of lithium-cobalt complex oxide, has a mean particle diameter in the range of 3 - 15 μm, the 1C and 0.2C capacity retentions, in paraticular, are improved and the deterioration of load characteristics with cycling can be suppressed.

Particularly when the mean particle diameter of the third complex oxide falls within the above-specified range, contact between particles of all the complex oxides is maintained at a higher degree of occurrence to thereby improve electronic conductivity of the cathode mix in its entirety as a result of a change in its electronic state. Also, expansion and shrinkage of each complex oxide are balanced in an effective manner. These are considered to result in the improved characteristics of the batteries G2, D and G3.

UTILITY IN INDUSTRY

As described above in detail, the present invention can

provide a secondary lithium battery which shows the reduced deterioration of load charactertistic with cycling.

C L A I M S

1. A nonaqueous electrolyte secondary battery characterized as using a mixture of a first oxide and a second oxide for its positive electrode material, said first oxide being a spinel oxide consisting substantially of lithium, manganese, a metal other than manganese, and oxygen, and said second oxide being different from the first oxide and consisting substantially of lithium, nickel, cobalt, a metal other than nickel and cobalt, and oxygen.

2. The nonaqueous electrolyte secondary battery as recited in claim 1, characterized in that said first oxide is an oxide derived via substitution of other element for a part of manganese in a lithium-manganese complex oxide and said second oxide is an oxide derived via substitution of cobalt and other element for a part of nickel in a lithium-nickel complex oxide.

3. The nonaqueous electrolyte secondary battery as recited in claim 1 or 2, characterized in that said first oxide is a lithium-manganese complex oxide represented by the compositional formula $Li_xMn_{2-y}Ml_yO_{4+z}$ (where, Ml is at least one element selected from the group consisting of Al, Co, Ni, Mg and Fe, $0 \leqq x \leqq 1.2$, $0 < y \leqq 0.1$ and $-0.2 \leqq z \leqq 0.2$).

4. The nonaqueous electrolyte secondary battery as